THE PERCEPTIONS OF STUDENTS ENROLLED IN AN ONLINE PERSONAL FINANCE CLASS IN HIGH SCHOOL AS COMPARED WITH STUDENTS IN A TRADITIONAL DIRECT-INSTRUCTION SETTING.

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ABSTRACT

The purpose of this study is to determine the preceptions of students of online instruction in a high school Personal Finance class versus that of a traditional, direct-instruction class. This study examines students perceptions of the effectiveness of the learning in a high school Personal Finance class through different delivery methods. This study further examines student scores on various assessments including pre-tests and post-tests in an effort to determine if there is a significant difference due to the delivery of the course materials. This study also includes feedback from instructors and administrators as to their perceptions and the effectiveness of the materials presented in different formats. Data will be extracted from Power School utilized by the West Shore School District.

This study is quantitative in the approach to analyzing the data provided from two sections of high school Personal Finance classes where one class is given the materials online and students are self-paced through the course. The other section of students will be taught in a traditional, direct-instruction setting with the instructor delivering the content in various formats. The study will also include survey results from both student groups and the instructors.

Based on the results of this study, it is predicted that there is no significant difference between instruction provided online and that which is taught in the traditional manner. In the future, courses of this nature may be taught online without direct instruction thereby freeing the instructor to focus on other areas of academia.

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CHAPTER ONE

INTRODUCTION

The purpose of this study is to determine the preceptions of students of online instruction in a high school Personal Finance class versus that of a traditional, direct-instruction class. This study examines students’ perceptions of the effectiveness of the learning in a high school Personal Finance class through different delivery methods. This study further examines student scores on various assessments including pre-tests and post-tests in an effort to determine if there is a significant difference due to the delivery of the course materials. This study also includes feedback from instructors and administrators as to their perceptions and the effectiveness of the materials presented in different formats.

This study is quantitative in the approach to analyzing the data provided from two sections of high school Personal Finance classes where one class is given the materials online and students are self-paced through the course. The other section of students will be taught in a traditional, direct-instruction setting with the instructor delivering the content in various formats. The study will also include survey results from both student groups and the instructors.

Online higher education classes and programs have become increasingly popular in the U.S., with existing brick-and-mortar schools offering more online courses at the same time that new distance-only institutions are emerging (Song, Singleton, Hill, & Koh, 2004)

Statement of the Problem

The Pennsylvania legislature is considering requiring instruction in Personal Finance as a mandatory course for high school students in order graduate. With House Bill 106 (2016) on the floor and likely to pass into law, schools will need to have this course prepared and ready to deliver to high school students in public schools in Pennsylvania. Unfortunately, monies to pay additional teachers and funding for other materials may not accompany this legislation. To that end, it may be financially impossible for public school districts to comply with this mandate via traditional, direct-instruction delivery of the course material. School districts may find that in order to comply they would have to find classroom space and/or materials for these mandated classes. To that end, this study will investigate the perceptions and efficacy of online instruction in this course to determine if that is a viable alternative to traditional instruction.

Purpose of the Study

The purpose of the study is to determine if online instruction is as effective and is perceived as effective by both students and teachers. There are not many research projects that compare the effectiveness of instruction in comparing online to traditional instruction.

Theoretical Framework

One purpose of this study is to evaluate the effectiveness of high school personal finance curriculum in an online environment versus traditional, direct instruction. The sample classes will be taken from currently enrolled students in Personal Finance classes at Red Land High School. There will be two sections of the course, each with 24-26 students. The students will be evenly mixed as to gender, grade level and general aptitude. One section will be taught in a traditional, direct teacher instruction model. The other will access the resources, taped lectures, worksheets and other materials online via Schoology.

Another aim for this particular study is to assess the student’s perceptions of the effectiveness of each type of instruction. In addition, the perceptions of the faculty involved in these courses will be determined via surveys and personal interviews.

Definition of Terms

Brick-and-mortar. Refers to an educational institution that offers traditional courses in which students attend courses with face-to-face interaction with instructors. Some online offerings may be available, but the focus is on the traditionally-presented courses.

Direct-Instruction - the use of straightforward, explicit teaching techniques, usually to teach a specific skill. It is a teacher-directed method, meaning that the teacher stands in front of a classroom and presents the information.

Distance education - Refers to "a process to create and provide access to learning when the source of information and the learners are separated by time and distance, or both" (Miller & Honeyman, 1993, p. 67). For the purposes of this study, the term distance education refers to online courses.

Efficacy – capacity for producing a desired result or effect; effectiveness

Online Course – classes that deliver the majority of the content, assignments, discussions and interaction via the Internet and include few to no face-to-face instructional meetings. Lecture content is typically broken down into topics and pre-recorded into shorter segments for digital access by students.

Traditional course - Courses that primarily involve instruction through faceto-face contact with the instructor in a physical classroom setting with no online component.

Assumptions

The major assumption of this study is that House Bill 106 will pass the Pennsylvania legislature and Personal Finance will become a graduation requirement in Pennsylvania public schools. Further, it is assumed that school districts will not have the resources available to create classroom space and/or invest in materials.

Online courses offer time and space flexibility that enables students to work on the materials at any time. It is assumed that this flexibility will result in higher student satisfaction in that learning environment.

Research Questions

1. Is there a difference in test scores for a Personal Finance course delivered online versus direct-instruction of the course?
2. Will instructors notice a significant difference in student outcomes in either an online or direct-instruction course?
3. Are there statistically significant differences in student characteristics between online and traditionally taught courses?
4. Does course delivery format influence course success in first year students enrolled in online and campus-based Personal Finance classes?

Significance of the Study

In reviewing online learning literature, very few studies examined a simultaneous course in two formats. This study is important because all public schools in Pennsylvania will be required to include a course of study in Personal Finance as a graduation requirement and school districts will need to devise a way to deliver this instruction without having to create classroom space and/or invest in materials. Administrators may benefit from this study by obtaining data that allow them to set policies about requirements for enrollment in online developmental courses. Measurement of success factors identified by this study could become part of existing placement procedures, or additional assessments could be developed and used when students wish to enroll in online developmental classes.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

Research continues to provide contradictory answers about learning in online and traditional classroom formats. Many studies to date, specifically that by Russell (1999) indicates that there are no significant differences in online and traditional classroom learning. While the Russell (1999) study is comprehensive and was conducted on a large-scale, several researchers are critical of this research. Studying the effectiveness of an online course is critical today because college tuition is steadily increasing and college debt is at its highest. Online courses are attractive to many students because they are convenient, cost effective, and the self-paced model will fit better into an individual’s schedule. The administrations at many universities are interested in the effectiveness of online course because revenue and research studies prove to be optimistic about online courses (Hill, 2016; Lapovsky, 2015). However, the areas of engagement, instructional design, and retention of information, have exposed some of the negative influence on student learning. Most importantly, research on learning technologies needs to remain current because timely data and research is a major concern for everyone involved in education. In this section, we review the foundational literature examining previous research on online and traditional student learning.

Historical Background

Online courses can provide flexibility in that student learning may occur at any time or place, but it is incredibly important to use intentional design and curriculum to support deeper learning (Ally, 2014; Lehamn, & Conceicao, 2014). There are few studies that examine the differences in learning through the same course in two delivery methods. One study conducted by Schutte (1997) investigated 33 students in a social statistics course. Students in the study were split into two groups, a traditional classroom and an online version. Results demonstrated the online class scored an average of 20% higher than the traditional classroom on examinations (Schutte, 1997), which continues to verify the need for this study. Several research studies suggest social interaction among students and the instructor contribute to the effectiveness of an online course (Ally, 2014; Lehamn & Conceicao, 2014; Swan, 2001).

Instructional Design

Particular attention must be paid to the design of a course to support learning and engagement (Ally, 2014). In any course, an essential component to the design is social presence. Piccaino (2002) cites, “the success of many online courses is dependent upon the nature of student to student and student to faculty interaction” (p. 33). These opportunities for interactions between students and teachers must be embedded in the course design and should provide multiple outlets for social interactions.

Online Classroom

Research by Ally (2004) shows that students in online learning environments score higher on assessments compared with their traditionally taught counterparts regardless of demographic data. Moreover, researchers also note, that an “advantage of asynchronous learning is it allows students to reflect upon the materials and their responses before responding, unlike traditional classrooms (Richardson & Swan, 2003, p. 69). The authors indicate the ability to process material and make sense of the concepts before responding to the question or prompts in the online format.

Theoretical Framework for the Study

One purpose of this study is to evaluate the effectiveness of high school personal finance curriculum in an online environment versus traditional, direct instruction. The sample classes will be taken from currently enrolled students in Personal Finance classes at Red Land High School. There will be two sections of the course, each with 24-26 students. The students will be evenly mixed as to gender, grade level and general aptitude. One section will be taught in a traditional, direct teacher instruction model. The other will access the resources, taped lectures, worksheets and other materials online via Schoology.

Another aim for this particular study is to assess the student’s perceptions of the effectiveness of each type of instruction. In addition, the perceptions of the faculty involved in these courses will be determined via surveys and personal interviews.

Summary

Online courses are becoming more prevalent in education today. This study will investigate the effectiveness of the online model versus the traditional, direct instruction in a high school personal finance course. The study will use test scores, surveys and personal interviews to determine whether the delivery method can cause a significant difference in student results.

CHAPTER THREE

METHODOLOGY

This chapter describes the detailed research methods that were used to investigate the perceptions of public high school students enrolled in a Personal Finance class as to whether or not there is a difference in comprehension of materials between those taught online and those taught in a traditional, face-to-face setting. This study was conducted at Red Land High School in the West Shore School District in central Pennsylvania. The student demographics are varied with an overall student population of over 1200 students.

The potential study population included approximately 150 students in grades nine through twelve who are enrolled in the district’s Personal Finance class in the 2017-18 school year. This course is designed to be presented in a face-to-face setting in a traditional brick and mortar high school. It is an elective course. The course covers money management, goal setting, financial decision-making, credit, savings, investing, risk management and budgeting. Personal Finance was offered as a traditional course in one section of students and in an online, synchronous setting for another section of students.

***Similarities and Differences between Courses***

Both courses had the same instructor, text, course notes, and learning objectives; used similar grading criteria; and the use the same or similar pen-pencil and online exams. The instructor was available to both courses during the same allotted office hours, by appointment, or via email or telephone. The traditional course had weekly quizzes while the online course had weekly homework over the material presented the previous week. The traditional section received lectures with the instructor present using PowerPoint presentations while the online course viewed previously videotaped lectures through streamed media accessed online. This streaming video consists of audio and visual of the instructor and the rolling PowerPoint slides. The traditional section met five times a week for approximately 51 minutes each time whereas the online section had one week to watch approximately 2.5 hours of video lecture and complete any assignments. The streaming video lectures were also accessible by students in the traditional section as a means to have concepts repeated or make-up missed class lectures. The online section had three sets of student-run, synchronous online chat sessions with four to six students per group. Students complete two of four available cases studies individually and then met online to come to a group consensus regarding case answers. Answers from each group were posted and critiqued by classmates. The traditional section completed two sets of cases independently or in groups. Cases were reviewed in-class with students answering questions in teams of five to seven students per team. The online students only met with the instructor for an initial one-hour orientation session at the beginning of the course and were not required to meet with the instructor at any other time during the semester even though the instructor was in the classroom. Table 1 shows the similarities and differences between instructional elements of the online and traditional Personal Finance Courses.

Table 1: Similarities and Differences between Instructional Elements of the Studied Online and Traditional Personal Finance Courses.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Online** | **Traditional** | **Similarities/Differences** |
| **Exams** | 6 Exams; 25 pts each | Same | exam questions are  identical between the courses |
| **Homework** | Weekly homework  assigned,  2 – 3 pts each | None | Due to online testing security concerns, weekly homework were used to reinforce course content. Since these are open book, the point values are minimal. |
| **Learning Objectives** | Same | Same | All exam questions are  derived from the learning  objectives. |
| **Online Practice Questions/Case Studies** | Available 2 weeks before each exam | Same | Online practice questions were available to both courses |
| **Course Text** | Same | Same | 25% of test questions come from the text rather than the notes. |
| **Course Notes** | Note Taking Guides provided to each student | Same | Same notes packet used for both courses. |
| **Lecture Material** | Approximately 2.5 hours of video lecture viewing required each week | Approximately 2.5 hours spent each week in the classroom involving lecture and class discussion. | Students in the TD course also had access to the same video lectures used in the online class. |

***Measurements***

A survey was administered prior to the course work and was used to measure aptitude for online instruction, preferred learning styles, and student characteristics. Characteristics measured included: age, gender, prior computer experience, year in school, prior online courses, and prior business class experience. An additional survey was used to measure student satisfaction with elements of the course, instructor, and self- perceived gains in learning. Learning outcomes were objectively evaluated using exam scores.

***Survey Instruments***

The first survey was The Online Learning Attitude Survey and was a 13-question survey followed by 5 demographic questions relating to individual student characteristics. The survey questions were adapted from The OnlineLearning.net Self-Assessment Quiz.(Online). The first 13 questions are has two possible answers: True or False. Students scoring 10-12 True answers would be deemed to be the most successful in an online course. Students who score less than 9 True responses may succeed in an online course, but would need to make a few adjustments in his/her study schedule and/or acquire additional equipment or services in order to succeed. See Appendix A for a copy of the complete Online Learning Attitude survey instrument used in this study.

The Course Evaluation Survey was created on SurveyMonkey.com. This survey is a 8-question assessment using a rating scale to answer the following seven questions: 1) How likely is it that you would recommend this session to a friend or colleague? 2) How relevant is the material to your role? 3) How clear was the presentation of the information? 4) How do you feel about the amount of information presented? 5) How engaging was your instructor? 6) How would you rate your instructor’s knowledge of the material? 7) How clear are your takeaways from the sessions? The final question is a short answer format asking if the students have any other comments, questions or concerns. A copy of the survey is attached to this paper as Appendix B.

***Confidentiality and IRB Approval***

This research project was approved by the Bloomsburg University institutional review

board (IRB). Since this was a voluntary, non-interventional project conducted with high school students, completion of the surveys was considered to be consent, thus additional consent forms were not required by the IRB. All course data including examination scores were deidentified by the course instructor prior to data analysis.

CHAPTER 4

ANALYSIS OF THE DATA

Introduction

The purpose of this study is to determine the preceptions of students of online instruction in a high school Personal Finance class versus that of a traditional, direct-instruction class. This study examines students perceptions of the effectiveness of the learning in a high school Personal Finance class through different delivery methods. This study further examines student scores on various assessments including pre-tests and post-tests in an effort to determine if there is a significant difference due to the delivery of the course materials. This study also includes feedback from instructors and administrators as to their perceptions and the effectiveness of the materials presented in different formats. This chapter analyzes the data collected and reports the findings that address the research questions posed in Chapter 1:

1. Is there a difference in test scores for a Personal Finance course delivered online versus direct-instruction of the course?
2. Will instructors notice a significant difference in student outcomes in either an online or direct-instruction course?
3. Are there statistically significant differences in student between online and traditionally taught courses?
4. Does course delivery format influence course success in first year students enrolled in online and campus-based Personal Finance classes?

Quantitative Findings

A survey of aptitude was developed by the researcher to assess student preparedness and to predict success in an online course environment. The final survey used in this study was designed using a Likert scale and contained 8 questions. This survey asked the respondents to rate the instruction, material, information presented and overall satisfaction with the course.

Table 2 – RQ 1

*Is there a difference in test scores for a Personal Finance course delivered online versus direct-instruction of the course?*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Score Average | Test 1 | Test 2 | Test 3 | Test 4 |
| Online Instruction | 87% | 92% | 94% | 95% |
| Direct Instruction | 86% | 93% | 92% | 94% |

Table 3 – RQ 2

*Will instructors notice a significant difference in student outcomes in either an online (OL) or direct-instruction (DI) course?*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Instructor | 1 | 2 | 3 | 4 |
| Differences noted | Students in the OL course performed better on tests and quizzes. | Students in the DI course needed more time to complete assignments. | Students in the OL course required more teacher time and attention compared to DI students. | No differences noted. |

Table 4

*Are there statistically significant differences in student characteristics between online and traditionally taught courses?*

|  |  |  |
| --- | --- | --- |
| Student Characteristics | Taught Online | Traditionally Taught |
| Gender | -0.12 | 0.12 |
| Ethnicity | -0.89 | 0.89 |
| High School GPA | 0.01 | -0.01 |
| SAT Scores | -0.09 | 0.09 |
| Age | 0.06 | 0.10 |

Table 5

*Does course delivery format influence course success in first year students enrolled in online and campus-based Personal Finance classes?*

|  |  |  |
| --- | --- | --- |
| Independent Variable | Value | Df |
| Course Delivery Format | 100.352 | 1 |
| Sex of Student | 976.651 | 1 |
| Age of Student | 504.876 | 5 |
| Race/Ethnicity of Student | 2175.037 | 7 |
| Enrollment Status | 1345.681 | 1 |

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The purpose of this study was to determine the preceptions of students of online instruction in a high school Personal Finance class versus that of a traditional, direct-instruction class. This study examined students’ perceptions of the effectiveness of the learning in a high school Personal Finance class through different delivery methods. This study further examined student scores on various assessments including pre-tests and post-tests in an effort to determine if there is a significant difference due to the delivery of the course materials. This study also includes feedback from instructors and administrators as to their perceptions and the effectiveness of the materials presented in different formats. This chapter provides a discussion of the findings of this research study. Implications and recommendations are presented, including suggestions for further research. Conclusions of the study are then discussed.

Summary of Research Findings

This study was proposed to explore participant’s perceptions regarding their experiences with the online and face-to-face delivery modes of instruction and to explore how delivery method might impact the participant’s achievement of domain knowledge in a high school Personal Finance class. Quantitative and qualitative methods were employed to investigate these areas of inquiry. Following is a discussion of the implications of the four research questions addressed in this study, along with associated hypotheses.

Research Question #1

Is there a difference in test scores for a Personal Finance course delivered online versus direct-instruction of the course?

There was no significant difference in test scores between the two groups of students. Both groups scored within 1.3% on all test objects in the course. This leads to the conclusion that the content does not significantly change in either method of course delivery.

Research Question #2

Will instructors notice a significant difference in student outcomes in either an online or direct-instruction course?

Instructors in both courses agreed with the participants in that both found the face-to-face instruction more engaging and motivating.

Research Question #3

Are there statistically significant differences in student characteristics between online and traditionally taught courses?

Although the content delivered in each mode of instruction wa the same, the participants viewed their experiences differently. Participants found the face-to-face instruction more engaging, less distracting and more motivating.

Research Question #4

Does course delivery format influence course success in first year students enrolled in online and campus-based Personal Finance classes?

Data indicates that a significantly higher proportion of campus-based students experienced course success than online students. Seventy-two percent of campus-based students earned a C or higher grade in comparison with fifty-one percent of online students.

Recommendations for Future Research

Further studies are needed in order to expand the body of knowledge on motivation and engagement in distance learning models. Additional research is also needed to expand on the known factors that impact student success in online courses, especially in light of the recent popularity of online courses in education. While there is much research regarding what helps students succeed in traditional classrooms, more study of what helps students succeed in an online environment. A replication of this study could confirm the results achieved here. Further investigation into the background knowledge of students as well as GPA, computer literacy and motivation.

Conclusion

The primary focus of this study was student’s perceptions in an online course versus that of traditional, direct instruction. Specifically, the study sought to examine the effectiveness of materials presented in different formats. In addition, the perceptions of the faculty involved in these courses was determined via surveys and personal interviews. The major assumption of this study is that House Bill 106 will pass the Pennsylvania legislature and Personal Finance will become a graduation requirement in Pennsylvania public schools. During this study, it was discovered that many public schools have already included a course in Personal Finance in their graduation requirements making the passing of House Bill 106 a moot point. Schools recognize the importance of this course and the lessons for students. The findings in this study suggest that delivery method is not a factor in student success but instructors will need to find ways to make the online delivery of instruction more engaging. Student motivation is also an issue for online students and would need to be addressed going forward.

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**APPENDIX A**

**Online Learning Attitude Survey**

1. I have ready access to a computer and, through it, the Internet at home.

True False

1. I know how to use a computer.

True False

1. I can type over 30 WPM with fewer than 10 errors.

True False

1. I do not struggle with reading nor do I have a reading disability.

True False

1. I am understand how to view YouTube videos.

True False

1. Exploring new things appeals to me.

True False

1. I’ve never had trouble working independently.

True False

1. I have at least 5 hours a week available to study and work on this course outside of school.

True False

1. I am able to read and follow directions to learn how to do something.

True False

1. I am NOT considering taking an online course because I think the work will be easier than in a “real” class.

True False

1. In the last year or two, there was a class that I wanted to take, but couldn’t fit it into my schedule.

True False

1. I like the exchange of ideas and the give and take of a typical classroom experience.

True False

1. I am motivated by the class material, not just a grade.

True False

1. My grade level is:

9 10 11 12

1. I am a:

Male Female Trans Other

1. My current age is:

14 15 16 17 18 19

1. My current GPA is \_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Have you taken an online course before?

Yes No

**APPENDIX B**

**COURSE EVALUATION SURVEY**

Please rate your experience in this class on the following survey.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. How likely is it that you would recommend this course to a friend? | | | | | | | | | | |
| Not at all likely Extremely likely | | | | | | | | | | |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1. How relevant is the material to your role? | | | | | | | | | | |
| Not at all relevant Extremely relevant | | | | | | | | | | |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1. How clear was the presentation of the information? | | | | | | | | | | |
| Not at all clear Extremely clear | | | | | | | | | | |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1. How do you feel about the amount of information presented? | | | | | | | | | | |
| Too little information Too much information | | | | | | | | | | |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1. How engaging was your instructor? | | | | | | | | | | |
| Not at all engaging Extremely engaging | | | | | | | | | | |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1. How would you rate your instructor’s knowledge of the material? | | | | | | | | | | |
| Not at all knowledgeable. Extremely knowledgeable | | | | | | | | | | |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1. How satisfied are you that you learned about Personal Finance in this course? | | | | | | | | | | |
| Not at all satisfied Extremely satisfied | | | | | | | | | | |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1. Do you have any other comments questions or concerns? | | | | | | | | | | |
|  | | | | | | | | | | |